

Claims

1. An apparatus for translating and recomposing electronic news text and images from a form derived from print publication electronic files to a form displayable on the
5 World Wide Web, comprising:

a server computer system, comprising one or more interconnected computer processors each with its own memory and secondary storage, for storing, converting, organizing and displaying news information on the World Wide Web, including means for receiving a plurality of print publication electronic files comprising news story text data and news story image data;

10 an editorial database for storing information extracted from the print publication electronic files,

15 a news story filter program for extracting text information from the print publication electronic files, converting the text information into a database format, and storing the text information in the editorial database, and

20 a news story publishing program for extracting text information from the editorial database, converting the text information into a form suitable for display on the World Wide Web, and storing the text information in a set of newspaper story text files capable of display at a news Website on the World Wide Web.

25 2. The apparatus of claim 1 further comprising:

a plurality of templates for organizing the display of the news text files and edited news files on the World Wide Web,

27 a set of news Web pages capable of display on the World Wide Web.

3. An apparatus for translating and recomposing electronic news text and images from a form derived from print publication electronic data files to a form displayable on the
30 World Wide Web, comprising:

a server computer system, comprising one or more interconnected computer processors each with its own memory and secondary storage, for storing, converting, organizing and displaying news information on the World Wide Web,

an editorial database for storing information extracted from the print publication electronic data files,

5 a news story filter program for extracting text information from the print publication electronic data files, converting the text information into a database format, and storing the text information in the editorial database, and

a news story publishing program for extracting text information from the editorial database, converting the text information into a form suitable for display on the World Wide Web, and storing the text information in a set of news text files capable of display at a news Website on the World Wide Web.

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4. The apparatus of claim 1 wherein the plurality of print publication electronic files comprises one or more data files selected from the group consisting of:

a set of newspaper story text electronic data files each containing one or more news stories,

a set of newspaper image electronic data files each containing one or more news pictures,

a set of classified advertisement electronic data files each containing one or more classified advertisements,

a set of death notice electronic data files each containing one or more notices of deaths,

a news image library for containing the newspaper image electronic data files in a common format, and

a set of news summary electronic data files to be mailed electronically to electronic news subscribers.

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5. The apparatus of claim 1 further comprising an electronic news subscriber database for storing electronic mail addresses and information preferences of electronic news subscribers.

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6. The apparatus of claim 1 further comprising a news image conversion program for extracting image information from the newspaper image data files, converting the image

information into files in a common image format, and storing the image information in image files in an electronic news image library.

7. The apparatus of claim 1 further comprising:

5 a classified advertisement database for containing classified advertisement information,

a classified notices program for editing text classified advertisement information and storing the edited classified advertisement information in the classified advertisement database, and

10 a classified notices maintenance program for updating edited classified advertisement information stored in the classified advertisement database.

8. The apparatus of claim 1 further comprising:

a death notices database for containing death notice information, and

a death notices program for editing text death notice information and storing the edited death notice information in the death notices database.

9. The apparatus of claim 1 further comprising:

a classified advertisement and death notices database for containing classified advertisement information,

a classified notices program for editing text classified advertisement information and storing the edited classified advertisement information in the classified advertisement and death notices database,

25 a classified notices maintenance program for updating edited classified advertisement information stored in the classified advertisement and death notices database,

a death notices program for editing text death notice information and storing the edited death notice information in the classified advertisement and death notices database.

30 10. The apparatus of claim 1 further comprising:

an editorial maintenance program for proofreading and editing the contents of the editorial database, associating some news stories in the editorial database with image files in the electronic news image library, and initiating the news story filter program and the news story publishing program.

- 5 11. The apparatus of claim 1 further comprising:
an electronic news archive for containing past news text information, and
a news story archive program for extracting text information from the newspaper
story text data files, converting the text information into an archive format, and storing
the text information in the electronic news archive.
- 10 12. The apparatus of claim 2 wherein each template contains a plurality of lists of
links to other news stories and news Web pages.
- 15 13. The apparatus of claim 12 wherein a list of links contains a link to each section of
the news.
- 20 14. The apparatus of claim 12 wherein a list of links contains a link to each topic of
the news in a single section of the news.
- 25 15. The apparatus of claim 2 wherein the templates comprise one or more templates
selected from the group consisting of:
a main Web page template for presenting a plurality of top news stories,
a section Web page template for presenting a plurality of top news stories of one
section of the news,
a topic Web page template for presenting a plurality of top news stories in one
topic of the news, and
a story Web page template for presenting a single news story.
- 30 16. The apparatus of claim 2 wherein the templates comprise one or more templates
selected from the group consisting of:

a baseball box score Web page template for presenting a plurality of baseball box scores,

a baseball leaders Web page template for presenting a plurality of top news stories of one section of the news,

5 a baseball standings Web page template for presenting the relative team standings of a plurality of baseball leagues,

a football box score Web page template for presenting a plurality of football box scores, and

10 a football standings Web page template for presenting the relative team standings of a plurality of football leagues.

17. The apparatus of claim 2 wherein the templates comprise one or more templates selected from the group consisting of:

a bridal Web page template for presenting a plurality of wedding announcements and related information,

an entertainment Web page template for presenting a plurality of entertainment event announcements and entertainment sources,

a movie reviews Web page template for presenting a plurality of reviews of movies,

20 a cartoon Web page template for presenting a plurality of cartoons, and

a travel Web page template for presenting a plurality of travel related stories and related information.

18. The apparatus of claim 2 wherein the templates comprise one or more templates selected from the group consisting of:

25 an archival Web page template for presenting an entry allowing a reader to search the news story archive.

19. The apparatus of claim 1 wherein the editorial database comprises a relational 30 editorial database supported by a relational database management system.

20. The relational editorial database of claim 19 wherein said relational database comprises:

- one or more tables of news story texts and news story classifications,
- one or more tables of news topic information and news topic classifications,
- one or more tables of news section information and news section classifications,
- one or more tables of geographic classification information,
- one or more tables of news story source information,
- one or more tables of news story linkage information, and
- one or more tables of news image caption information.

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21. The editorial maintenance program of claim 10 further comprising a set of maintenance subprograms for updating information stored in a plurality of tables in the editorial database.

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22. The electronic news archive of claim 11 wherein the electronic news archive comprises a relational database.

23. The electronic news archive of claim 11 wherein the electronic news archive comprises a set of electronic files related to each other by their names, their content, or a separate directory means of association.

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24. The apparatus of claim 4 wherein the news image library comprises a set of electronic files related to each other by their names, their content, or a separate directory means of association.

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25. The set of newspaper story text data files of claim 1 wherein each text data file comprises:

- a news story,
- formatting information defining the appearance of said news story for readers, and
- descriptive information defining the content of said news story.

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26. The story text data file of claim 25 wherein the formatting information is stored in the form of codes of one or more text markup languages.

27. The story text data file of claim 26 wherein the markup language used is HTML.

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28. The story text data file of claim 25 wherein the descriptive information is stored in the form of codes of one or more text markup languages.

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29. The story text data file of claim 28 wherein the markup language used is HTML.

30. The story text data file of claim 25 wherein the descriptive information is stored in the form of keywords in the text of the news story.

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31. The apparatus of claim 2 wherein a plurality of the set of news Web pages comprise text files.

32. The text files of claim 31 wherein a plurality of the text files contain information which may be updated at the time the file is accessed for display.

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33. The apparatus of claim 2 wherein a plurality of the set of news Web pages comprise image files.

34. The apparatus of claim 1 wherein the server computer system comprises:
25 a conversion computer subsystem with its own main memory and secondary storage, for reorganizing the newspaper text data files into news Web pages, and
a Web server computer system with its own main memory and secondary storage, for retrieving, updating and displaying the news Web pages for a reader.

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35. The classified advertisement database of claim 7 wherein the classified advertisement database comprises a relational classified advertisement database supported by a relational database management system.

36. The relational classified advertisement database of claim 35 wherein said relational database comprises:

- one or more tables of classified advertisement information,
- one or more tables of help wanted information, and
- one or more tables of help wanted keyword information.

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37. The death notices database of claim 8 wherein the death notices database comprises a relational death notices database supported by a relational database management system.

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38. The relational death notices database of claim 37 wherein said relational database comprises one or more tables of death notice information.

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39. The apparatus of claim 9 wherein the classified advertisement database and the death notices database together comprise a relational classified and death notices database supported by a relational database management system.

40. The relational classified and death notices database of claim 39 wherein said relational database comprises:

- one or more tables of classified advertisement information,
- one or more tables of help wanted information,
- one or more tables of help wanted keyword information, and
- one or more tables of death notice information.

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41. The electronic news subscriber database of claim 5 wherein the electronic news subscriber database comprises a relational database.

42. The electronic news subscriber database of claim 41 wherein said relational database comprises:

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- one or more tables of subscriber information.

43. The electronic news subscriber database of claim 5 wherein the electronic news subscriber database comprises a set of electronic files related to each other by their names, their content, or a separate directory means of association.

5 44. The set of templates of claim 2 wherein each template includes embedded program code executable only by the server computer system.

45. The set of templates of claim 2 wherein each template includes embedded directives for substitution of template content with the contents of other electronic files.

10 46. The filter program of claim 1 further comprising:
a first filter subprogram to determine a story's topic classification based on combinations of multiple data elements in a story,
a second filter subprogram to determine a story's topic classification by using the story's kicker to determine a topic associated with the kicker in the editorial database,
a third filter subprogram to determine a story's topic classification by using the story's town to determine a topic associated with the town in the editorial database, and
a fourth filter subprogram to determine a story's topic classification by using a weighted count of keywords found to select the topic associated in the editorial database with the most heavily weighted keyword.

20 47. The filter program of claim 1 further comprising a subprogram to initiate execution of the publish program.

25 48. The publishing program of claim 1 further comprising:
a story Web page creation subprogram to embed news story text and images in a story Web page template,
a main Web page creation subprogram to embed multiple news story texts and images in a main Web page template,
30 a section Web page template subprogram to embed multiple news story texts and images in a section Web page template, and

a topic Web page template subprogram to embed multiple news story texts in a topic Web page template.

49. The editorial maintenance program of claim 10 further comprising:

5 a stray stories maintenance Web page for enabling a proofreader to place a story on the website by updating the story's section ID and topic ID combination in the editorial database,

10 a story finding maintenance Web page for displaying for a proofreader a list of all the headlines for a given day, thereby enabling the proofreader to create a link to a specific story in the editorial database,

15 a story editing maintenance Web page for enabling a proofreader to update all information for a story in the editorial database,

20 a headline maintenance Web page for enabling a proofreader to add a headline to a story, or change a story's headline, in the editorial database,

a story ordering maintenance Web page for enabling a proofreader to place the stories on the section Web pages in order of importance,

25 a published status maintenance Web page for enabling a proofreader to change the published status of stories in the editorial database to permit their republication on the news Website,

30 a story search Web page for enabling a proofreader to search for stories in the editorial database,

a program starting maintenance Web page for enabling a proofreader to start execution of the news story filter program and the news story publish programs, and

25 a picture linkage maintenance Web page for enabling a proofreader to associate one or more images in the photo and graphic image library with a specific story in the editorial database.

50. The editorial maintenance program of claim 10 further comprising:

30 an author editing maintenance Web page for enabling a proofreader to correct author information specified in the editorial database for a story,

5 a press editing maintenance Web page for enabling a proofreader to correct press information specified in the editorial database for a story,

10 a town topic maintenance Web page for enabling a proofreader to update the topic ID for a town in the editorial database,

15 a keyword maintenance Web page for enabling a proofreader to update a story's assigned topic in the editorial database,

a kicker assignment maintenance Web page for enabling a proofreader to assign a kicker to the correct topic in the editorial database,

20 a topic finding maintenance Web page for enabling a proofreader to assign or reassign kickers in the editorial database,

a kicker topic maintenance Web page for enabling a proofreader to add, change or eliminate the topic ID assigned to a kicker in the editorial database,

25 a story appending maintenance Web page for enabling a proofreader to append a story to the end of another story in the editorial database, and

30 a story replication maintenance Web page for enabling a proofreader to create multiple copies of a story in the editorial database.

51. A method for translating and recomposing news text and images from a form capable of print publication to a form displayable on the World Wide Web, comprising the steps of:

extracting raw story text and classification information from newspaper story electronic data files,

converting the raw story text and classification information into an editorial database format,

25 storing the converted story text information in an editorial database in an organization determined by story classification information extracted from the raw story information,

extracting image information from newspaper image electronic data files,

converting the image information into a common image format,

30 storing the image information in image electronic data files in a news image library,

extracting story information from the editorial database and image electronic data files from the electronic news image library,

organizing and storing the extracted story information and image electronic data files on a news Website in a set of news Web pages suitable for display and reading on the World Wide Web, and

displaying the news Web pages to a Web user.

5 52. The method of claim 51 further comprising the step of extracting text formatting information from newspaper story text electronic data files.

10 53. The method of claim 51 wherein the step of extracting raw story classification information from newspaper story text electronic data files comprises the steps of:

determining a story's topic classification based on combinations of multiple data elements in a story,

determining a story's topic classification by using the story's kicker to determine a topic associated with the kicker in the editorial database,

determining a story's topic classification by using the story's town to determine a topic associated with the town in the editorial database, and

20 determining a story's topic classification by using a weighted count of keywords found to select the topic associated in the editorial database with the most heavily weighted keyword.

54. The method of claim 51 further comprising the step of proofreading news electronic files to change their appearance and organization.

25 55. The method of claim 54 further comprising:

adding, changing or deleting records in the editorial database,

reorganizing records in the editorial database, and

30 associating news text electronic data files with available image electronic data files in the electronic news image library.

56. The method of claim 54 wherein proofreading further comprises:
extracting, converting and storing story text information,
providing means for a proofreader to initiate a process for database retrieval,
conversion and formatting of news text and image information for display on the World
Wide Web, and
5 providing means for a proofreader to direct news text and image information
formatted for display on the World Wide Web either to a test news Website or a public
news Website.

10 57. The method of claim 51 wherein the step of organizing and storing the extracted
story information and image electronic data files in a form suitable for display and
reading on the World Wide Web, further comprises:
retrieving Web page template files defining the form and interconnections of news
Web pages,
15 retrieving news story information from the editorial database,
executing Web page template commands to replace template directives with
specific news text electronic file contents retrieved from the editorial database,
retrieving image electronic data files from the electronic news image library, and
storing the combined edited news text files and image files in a set of edited news
electronic Web pages for display on the World Wide Web.
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58. The method of claim 51 wherein the step of organizing and storing the extracted
story information and image electronic data files in a set of news Web pages suitable for
display and reading on the World Wide Web further comprises:
25 retrieving stored edited news electronic Web pages for display to a Web user,
executing program code in the edited news electronic Web pages to store current
server information in the retrieved Web pages for the Web user, and
transmitting the edited news electronic Web pages with current information to the
Web user.
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59. The method of claim 51 further comprising the step of archiving text information from newspaper text electronic data files.

60. The method of claim 59 wherein the step of archiving text information from newspaper text electronic data files, further comprises:

- extracting text information from newspaper text electronic data files,
- converting the text information into an archive format,
- storing the text information in an electronic news archive, and
- removing archived text information from the editorial database.

10 61. The method of claim 51, further comprising the step of selecting and sending news information to news subscribers via electronic mail.

62. The method of claim 61 wherein the step of selecting and sending news information to news subscribers via electronic mail, further comprises:

- providing a means for a plurality of subscribers to request electronic mail presentation of news information,
- providing a means for a subscriber to specify a plurality of selection criteria for news topics for electronic mail presentation,
- extracting news information according to subscriber selection criteria,
- preparing an electronic mail message for each subscriber requesting electronic mail presentation of news information, and
- transmitting the electronic mail messages to all subscribers requesting electronic mail presentation of news information.

25 63. The method of claim 51, further comprising the step of delivering the set of news Web pages on a daily basis to the World Wide Web for presentation to Web users.

30 64. The method of claim 51, further comprising the step of delivering the set of news Web pages to the World Wide Web for presentation to Web users on the basis of changes in news information.